

## Get Point, Node, Element, and Part Information

### INTRODUCTION

EnSight provides many methods for extracting exact quantitative data from your results. Specific information about nodes, elements, parts, or arbitrary points can be displayed.

## **BASIC OPERATION**

#### **Show Point Information**

To show information about an arbitrary point:

- 1. If your data is transient, set the desired time using the Solution Time Quick Interaction area (Edit > Solution Time Editor...).
- 2. If you have multiple Cases, select the desired case using Case > casename.
- 3. Position the Cursor Tool to the desired location.
- 4. Select the desired part(s) in the Main Parts List. The query will only be successful if the Cursor Tool is found within an element of a selected part.
- 5. Select Query > Show Information > Point.

The query results will be printed to the Status History area (just above the Quick Interaction area). The following shows sample output from a point query:

Point (6.19810e-01,2.77589e-01,2.41451e-01)(In Frame 0) Query Information. Found in structured part # 2. Found in element # 168379. Closest node # 178271. (within the element) Value for Variable density is 9.96230e-01. Values for Variable momentum are:

x=3.03989e-01,y=-1.42727e-02,z=8.51241e-02,mag=3.16005e-01.

#### **Show Node Information**

To show information about a specific node, you must have either given or automatically assigned node labels for your data. You must also know the number of the node of interest. If you do not know the number, you can display **node** labels for the part or, if you know an element that contains the node, you can display element information for the element (as described in the next section). To show node information:

- 1. If your data is transient, set the desired time using the Solution Time Quick Interaction area (Edit > Solution Time Editor...).
- 2. If you have multiple Cases, select the desired case using Case > casename.
- 3. Select the desired part(s) in the Main Parts List. The query will only be successful if the specified node is found in a selected part.
- 4. Select the variable(s) you wish to query in the Main Variables List (only node-based variables will be queried).
- 5. Select Query > Show Information > Node. The Query Prompt dialog opens. Enter the ID number of the desired node in the text field and click Okay.

The query results will be printed to the Status History area (just above the Quick Interaction area). The following shows sample output from a node query:

Node 123 Query Information.

Coordinates (In Frame 0) are: (-2.00000e+00,0.00000e+00,1.19320e+00)

Found in unstructured part # 1.

Values for Variable velocity are:

x=5.82290e-01,y=3.70160e-02,z=-1.82780e-03,mag=5.83468e-01.



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#### **Show Element Information**

To show information about a specific element, you must have either given or automatically assigned element labels for your data. You must also know the number of the element of interest. If you do not know the number, you can display **element labels** for the part. To show element information:

- 1. If your data is transient, set the desired time using the Solution Time Quick Interaction area (Edit > Solution Time Editor...).
- 2. If you have multiple Cases, select the desired case using Case > casename.
- 3. Select the desired part(s) in the Main Parts List. The query will only be successful if the specified element is found in a selected part.
- 4. Select the variable(s) you wish to query in the Main Variables List (only element-based variables will be queried).
- 5. Select Query > Show Information > Element. The Query Prompt dialog opens. Enter the ID number of the desired element in the text field and click Okay.

The query results will be printed to the Status History area (just above the Quick Interaction area). The following shows sample output from an element query:

Element 321 Query Information.
Found in unstructured part # 2.
Type of element is 6 Noded triangle
Number of nodes is 6
Node IDs are: 1050 910 1054 1052 1053 1055
Neighboring Element Information is:
Element neighbor 318 is of type 6 Noded triangle

#### **Show Part Information**

To show information about a part:

- 1. If your data is transient, set the desired time using the Solution Time Quick Interaction area (Edit > Solution Time Editor...).
- 2. Select the desired part in the Main Parts List.
- 3. Select Query > Show Information > Part.

The query results will be printed to the Status History area (just above the Quick Interaction area). The following shows sample output from a part query:

Part 2 Query Information.\*
Unstructured part.\*
Number of nodes 2380\*
Minimum coordinate(In Frame 0) is (0.00000e+00,0.00000e+00,0.00000e+00)\*
Maximum coordinate(In Frame 0) is (3.80000e+01,1.20000e+01,0.00000e+00)\*
Element Information is: \*
Element type: 6 Noded triangle, count = 1128.\*

## SEE ALSO

How To Query Over Distance, How To Query Over Time, How To Probe Interactively.

User Manual: **Show Information**